

10/526293
DT01 Rec'd PCT/PT 0 1 MAR 2005

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An intervertebral implant having a central axis (1) substantially parallel to or coaxial with ~~the~~ an axis of a spinal column's axiscolumn, comprising:

(A) an upper and a lower terminal part (2; 3) each fitted with an outermost surface (5; 6) configured transversely to the central axis (1), said upper terminal part having a first concave inner surface (7) and said lower terminal part having a second concave inner surface (8), said first and second concave surfaces being opposite one another and each with a concave inner surface (7; 8) which are mutually opposite; and

(B) a joint element (4) configured between the terminal parts (2; 3) and resting in sliding manner against the concave inner surfaces (7; 8) of the ~~two~~ terminal parts (2; 3),

~~characterized in that~~ wherein

(C) the first concave inner surface (7) is a partial surface of a first external surface which is rotationally symmetrical about a first ~~an~~ axis of rotation (12) transverse to the central axis (1), and

(D) the second concave inner surface (8) is a partial surface of a second

rotationally symmetrical conical external surface (16) having ~~an~~ a second axis of rotation (14) perpendicular to the central axis (1).

2. (Currently Amended) ~~Intervertebral~~ The intervertebral implant as claimed in claim 1, ~~characterized in that~~ wherein the first axis of rotation (12) and the second axis of rotation (14) cross each other.

3. (Currently Amended) The intervertebral ~~Intervertebral~~ implant as claimed in ~~either of claims 1 and 2, characterized in that~~ claim 1, wherein the joint element (4) comprises at least one convex slide surface (9; 10) intersecting the central axis (1).

4. (Currently Amended) The intervertebral ~~Intervertebral~~ implant as claimed in claim 3, ~~characterized in that~~ wherein the radii of curvature of the first concave inner surface (7) and of the slide surface (9) resting against the convex joint element (4) are different and in that the slide surface (7) is spherical, ellipsoidal or barrel-like whereby a point-like rest is made possible between the convex joint element (4) and the first concave inner surface ~~surfaces~~-(7).

5. (Currently Amended) The intervertebral ~~Intervertebral~~ implant as claimed in claim 3, ~~characterized in that~~ wherein the radii of curvature of at least one of the slide surfaces (9; 10) at the convex joint element (4) and of at least one of the concave inner surfaces (7; 8) of the ~~two~~ terminal parts (2; 3) are different whereby linear rest may be implemented between the convex joint element (4) and ~~one or~~

~~both at least one of the~~ concave inner surfaces (7; 8).

6. (Currently Amended) The intervertebral ~~Intervertebral~~-implant as claimed in claim 3, ~~characterized in that wherein~~ the first slide surface (9) of the joint element (4) is complementary to the first concave inner surface (7) ~~of the upper terminal part (2) and that wherein~~ the first concave inner surface (7), together with the first slide surface (9), constitute the slide surfaces of a first joint rotatable about the first axis of rotation (12).

7. (Currently Amended) The intervertebral ~~Intervertebral~~-implant as claimed in ~~either of claims 3 and 6, characterized in that~~ claim 3, wherein the second slide surface (10) of the joint element (4) is complementary to the second concave inner surface (8) ~~of the lower terminal part (3) and in that wherein~~ the second concave inner surface (8), together with the second slide surface (10), constitute the slide surfaces of a second joint rotatable about the second axis of rotation (14).

8. (Currently Amended) The intervertebral ~~Intervertebral~~-implant as claimed in ~~one of claims 1 through 7, characterized in that~~ claim 1, wherein the second axis of rotation (14) intersects the central axis (1) at an angle α between 60 and 88°.

9. (Currently Amended) The intervertebral ~~Intervertebral~~-implant as claimed in ~~one of claims 1 through 8, characterized in that~~ claim 1, wherein the rotationally symmetrical external surface (11) is a circularly cylindrical external

surface.

10. (Currently Amended) The intervertebral ~~Intervertebral~~ implant as claimed in ~~one of claims 1 through 8, characterized in that~~ claim 1, wherein the rotationally symmetrical external surface (11) is a conical external surface.

11. (Currently Amended) The intervertebral ~~Intervertebral~~ implant as claimed in ~~one of claims 1 through 10, characterized in that~~ claim 1, wherein the first axis of rotation (12) and the second axis of rotation (14) are ~~apart~~ spaced from one another by a minimum distance A.

12. (Currently Amended) The intervertebral ~~Intervertebral~~ implant as claimed in claim 11, ~~characterized in that~~ wherein the distance A is between 0 and 18 mm.

13. (Currently Amended) The intervertebral ~~Intervertebral~~ implant as claimed in ~~one of claims 1 through 12, characterized in that~~ claim 1, wherein the outermost surfaces (5; 6) exhibit a three-dimensional structure.

14. (Currently Amended) The intervertebral ~~Intervertebral~~ implant as claimed in ~~one of claims 1 through 13, characterized in that~~ claim 1, wherein the outermost surfaces (5; 6) are titanium grids that can be connected to the terminal parts (2; 3).

15. (Currently Amended) The intervertebral ~~Intervertebral~~ implant as claimed in ~~one of claims 1 through 14, characterized in that~~ claim 1, wherein:

(a) the conical external surface (16) comprises a cone tip (18) situated on the second axis of rotation (14);

(b) the intervertebral implant comprises a front side (19) pointing at the cone tip (18) and opposite a rear side (20);

(c) at least one of the terminal parts (2; 3) comprises a first rotation-restricting stop (21) shortening the front side (19) of the intervertebral implant parallel to the central axis (1) about the first axis of rotation (12) at an angle of rotation β between 5 and 15°; and

(d) at least one of the terminal parts (2; 3) includes a rotation-restricting stop (22) shortening the rear side (20) of the intervertebral implant parallel to the central axis (1) about the first axis of rotation at an angle of rotation γ between 2 and 15°.

16. (Currently Amended) The intervertebral ~~Intervertebral~~ implant as claimed in ~~one of claims 1 through 15, characterized in that it includes~~ claim 15, further comprising a third stop (23) restricting the rotation about the second axis of rotation (14) at a maximum angle of rotation δ between $\pm 5^\circ$ and $\pm 10^\circ$.

17. (Currently Amended) The intervertebral ~~Intervertebral~~ implant as claimed in ~~one of claims 1 through 16, characterized in that~~ claim 1, wherein at least one of the terminal parts (2; 3) is a three-element part and comprises an outermost cover plate (24), a joint pan (26) enclosing the concave inner surface (7; 8) and in-

between an elastically deforming spacer (25).